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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/594,029	06/15/2000	Koji Tsukamoto	826.1610/JDH	9256

21171 7590 01/04/2005

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EXAMINER

NGUYEN BA, PAUL H

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/594,029

Applicant(s)

TSUKAMOTO, KOJI

Examiner

Paul Nguyen-Ba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant

1. This action is responsive to Request for Continued Examination (RCE), filed on November 26, 2004.
2. Claims 1-19 are currently pending. Claims 1, 4, 5, 10, 12, 13, 14, 15, 16, 17, 18, and 19 are independent claims.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egger et al. ("Egger"), U.S. Patent No. 6,233,571, in view of Lawrence et al. ("Lawrence"), U.S. Patent No. 6,289,342.

Independent Claim 1

Egger discloses *a reference reason identifying apparatus, comprising:*

a referred document extracting device extracting document information about a referred document from given document data (see Figure 3B - 96; column 4, lines 3-5; column 16, lines 37-39, 55+ → Initial Extractor Subroutine extracts and initializes data information); *and*

an output device outputting output information including the information extracted by the reference document extracting device and the reason why the referred document is cited (see Figure 5A-5H; column 5, lines 56-57; column 28, lines 24-25; column 29, lines 32-38 → displays key precedent and guidance as to possible gradations in between extensive or merely citing).

Egger does not explicitly disclose extracting information about a *position* where the referred document is cited in the document data, and a feature in the neighborhood of the position or *identifying a reason* indicating why the referred document is cited in the referring document from the information about the *position and the feature in the neighborhood* of the position extracted.

However, Lawrence discloses a citation indexing system that autonomously extracts citations and identifies the context of citations in the body of articles (see col. 1 lines 10-17; col. 5 lines 50-56). Citation identifiers are used to find the locations and *positions* in the document body where the citations are actually made. This allows extraction of the *features* (i.e. context) of the citations (see col. 9 lines 31-39). The context may contain *reasons for citation* by a referring document such as a brief summary of the paper, another author's response to the paper, or a subsequent work which builds upon the original article (see col. 6 lines 34-37).

Since Egger and Lawrence are both from the same field of endeavor, the purposes disclosed by Lawrence would have been recognized in the pertinent art of Egger. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Egger with the teachings of Lawrence to include extracting information about a *position* where the referred document is cited in the document data, and a feature in the neighborhood of the position and *identifying a reason* indicating why the referred document is cited in the referring document from the information about the *position and the feature in the neighborhood* of the position extracted for the purposes of autonomous citation indexing for information retrieval.

Claim 2

Egger further discloses *a document information extracting device extracting document information about the document data from the document data, and wherein said output device outputs the information extracted by the document information extracting device together with the output information* (see Figure 5B; column 29, lines 6-8; column 31, lines 14-19 → full text information display).

Claim 3

Egger further discloses *a reference reason identifying apparatus, wherein said identification device identifies the reason why the referred document is cited based on at least one of information about a chapter to which the position where the referred document is cited belongs* (see column 13, lines 59-61; column 14, lines 8-16; column 16, lines 39-48, 64+); *and information about a character string in the neighborhood of the position where the referred*

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document is cited (see column 4, lines 20-25 → identifies sections (i.e. character strings or chapters) of a document and determines why they are related).

Independent Claims 4 and 19

Egger discloses the reference reason identifying apparatus with respect to independent claim 1 as discussed above, but does not specifically teach: a *keyword storage* storing a keyword of each piece of document data; a *keyword extracting device* extracting keyword information of the referred document from information in the neighborhood of a position where the referred document is cited in the given document data; and a *keyword storing device* storing the keyword information as a keyword of the referred document in the keyword storage.

However, Lawrence discloses combining the use of automatic citation indexing and keyword indexing (see col. 6 lines 61-64). The downloaded papers are parsed to extract semantic features (i.e. context, keywords, etc.), which are stored in a database that can later be searched by keyword (see col. 6 lines 42-52).

Since Egger and Lawrence are both from the same field of endeavor, the purposes disclosed by Lawrence would have been recognized in the pertinent art of Egger. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Egger with the teachings of Lawrence to include a *keyword storage* storing a keyword of each piece of document data; a *keyword extracting device* extracting keyword information of the referred document from information in the neighborhood of a position where the referred document is cited in the given document data; and a *keyword storing device* storing the keyword information as a keyword of the referred document in the keyword storage for the purpose of keyword indexing for document retrieval.

Independent Claim 5

Egger discloses *an information retrieval apparatus, comprising:*

a document database device storing document data (see Figure 1 – 54; column 3, lines 54-55, 66+; column 10, lines 26-27, 41-43);

a reference correlation storage device storing a reference correlation including a reason indicating why a referred document is cited at a position in a specific document (see Figure 2; column 4, lines 5-9; column 11, lines 49-51);

a retrieval device retrieving the document data stored in the document database device using the reference correlation stored in the reference correlation storage device (see Figure 2; column 11, lines 58-59 → CSPDM retrieves the requested objects); and

an output device outputting a retrieval result including the reference reason (see Figure 2; column 7, lines 15-33, column 12, lines 1-9).

Egger does not specifically disclose a reason *based on a feature of the specific document in the neighborhood of the position*. However, Lawrence discloses a citation indexing system that autonomously extracts citations and identifies the context of citations in the body of articles (see col. 1 lines 10-17; col. 5 lines 50-56). Citation identifiers are used to find the locations and *positions* in the document body where the citations are actually made. This allows extraction of the *features* (i.e. context) of the citations (see col. 9 lines 31-39). The context may contain *reasons for citation* by a referring document such as a brief summary of the paper, another author's response to the paper, or a subsequent work, which builds upon the original article (see col. 6 lines 34-37).

Since Egger and Lawrence are both from the same field of endeavor, the purposes disclosed by Lawrence would have been recognized in the pertinent art of Egger. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Egger with the teachings of Lawrence to include a *reason* based on a feature of the specific document in the neighborhood of the position for the purpose of autonomous citation indexing for information retrieval.

Claim 6

With respect to claim 6, refer to the rationale relied upon to reject claim 1. Furthermore, Egger further discloses an information retrieval apparatus comprising *a device storing information including the information extracted by the referred document extracting device and the reference category in said reference correlation storage device* (see Figure 1 – 54; column 3, lines 54-55; column 4, lines 5-9; column 10, lines 26-27, 41-43; column 11, lines 49-51).

Claim 7

Egger further discloses an information retrieval apparatus wherein *said reference correlation storage device stores keyword information of the referred document extracted from the specific document* (see column 17, lines 23-28), *and said retrieval device retrieves the document data using the keyword information* (see Figure 2; column 11, lines 58-59).

Claim 8

Egger further discloses an information retrieval apparatus wherein *said output device includes a display device graphically displaying the reference correlation based on the reference category* (see Figure 2; column 7, lines 15-33, column 12, lines 1-9).

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Claim 9

Egger further discloses an information retrieval apparatus wherein *said output device includes a display device displaying the reference correlation in a time series* (see ABSTRACT; column 29, lines 25-27; column 32, lines 25-32 → reference cases can be displayed according to time of decision or date or decision).

Independent Claim 10

With respect to claim 10, refer to the rationale relied upon to reject claim 1. Furthermore, Egger discloses *a document classifying apparatus, comprising a similarity identification device calculating a similarity in reference correlation based on the reason indicating why the referred document is cited, between a plurality of pieces of document data, and classifying the plurality of the pieces of the document data* (see Figure 2 – 62; Figure 3A; column 3, lines 24-30; column 13, lines 41-50; column 16, lines 37+ → Proximity Indexing Application Program indexes the references); *and an output device outputting a classification result* (see Figure 2; column 7, lines 15-33, column 12, lines 1-9).

Claim 11

Egger further discloses *a document classifying apparatus comprising a keyword extraction device extracting keyword information of the referred document from information in the neighborhood of the position where the referred document is cited* (see column 17, lines 23-28), *and wherein said similarity identification device classifies the plurality of the pieces of the document data using the keyword information* (see Figure 2; column 11, lines 58-59).

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Independent Claim 12

Claim 12 incorporates substantially similar subject matter as claim 5, and is rejected along the same rationale.

Independent Claim 13

Egger discloses *a computer-readable storage medium on which is recorded a program enabling a computer to execute a process* (see column 11, lines 2-34). With respect to independent claim 13, refer to the rationale relied upon to reject claim 1.

Independent Claim 14

Egger discloses *a computer-readable storage medium on which is recorded a program enabling a computer to execute a process* (see column 11, lines 2-34). With respect to independent claim 14, refer to the rationale relied upon to reject claim 5.

Independent Claim 15

Egger discloses *a computer-readable storage medium on which is recorded a program enabling a computer to execute a process* (see column 11, lines 2-34). With respect to independent claim 15, refer to the rationale relied upon to reject claims 1 and 10.

Independent Claim 16

Egger discloses *a reference reason identifying apparatus*. With respect to independent claim 16, refer to the rationale relied upon to reject claim 1.

Independent Claim 17

Egger discloses *an information retrieval apparatus*. With respect to independent claim 17, refer to the rationale relied upon to reject claim 5.

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Independent Claim 18

Egger discloses *a document classifying apparatus with means*. With respect to independent claim 18, refer to the rationale relied upon to reject claim 1.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Nguyen-Ba whose telephone number is (571) 272-4094. The examiner can normally be reached from 10:30 am - 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PNB


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER